



The Raleigh Amateur Radio Society's **EXCITER**

GET INVOLVED

- RARS General Membership meeting: Second Tuesday of the month.
- The RARS net meets every night except Saturday @ 8 p.m. on 146.640.
- The RARS Technical & Trader's net: Saturdays @ 8:00 PM on 146.64.
- RARS meets for a monthly dinner on the First Tuesday of each month.



PUBLIC SERVICE EVENTS

Interested in helping? Visit <https://www.rars.org/public-service.php>

frequently for our 2019 ham public service schedule.

RARS General Meeting

Topic: DXpeditions in the western and eastern Caribbean with the Medical Amateur Radio Council, May & Oct 2019

Presenter: Bob Conder, K4RLC

Date: January 14, 2020

Time: Meeting at 7:30 PM

Informal gathering and refreshments from 7 - 7:30 p.m.

Where: Ridge Road Baptist Church. 2011 Ridge Rd., Raleigh

New HAM meeting, 6:00 p.m. before member meeting
Tadd Torborg, KA2DEW, New Ham Meeting Coordinator

[Click here for more information.](#)

Presidents Comments

Happy New Year to RARS members and everyone in Amateur Radio. I hope all of you had a wonderful holiday season.

I am certainly looking forward to the New Year, my first as President of the club. My thanks go out to all the members who honored me by selecting me for this position, and to Carl Davis, W8WZ, who has skillfully served the club as President for the past two years. Carl will continue to serve as Education Director. The education component of the Amateur Radio hobby is of special interest to Carl, and I appreciate that he is staying on to serve in this way.

[Continued on page 4](#)

RARS Officers

PRESIDENT

John Honeycutt
N8ZU
919.417.2477
jfh49@bellsouth.net

VICE PRESIDENT

Tom Lewis
N4TL
N4TL2@yahoo.com

SECRETARY

Mark Kilmer
KM4JRH
919.676.0110
mark.kilmer@gmail.com

TREASURER

Greg Seamster
KE4PAX
919.859.0029
KE4PAX@arrl.net



The Raleigh Amateur Radio Society

The Raleigh Amateur Radio Society, Inc. (RARS) was founded in 1969 and continues to serve and support the amateur radio community in the greater Triangle area. In 1999, the society incorporated a new RARS and obtained 501(c)(3) non-profit tax status.

The objectives of the club are to promote worldwide friendship through amateur radio; to be of public service by providing radio communications in times of disaster, emergency, or civic needs; to educate members in radio technique, and to provide training classes to assist in obtaining amateur radio licenses.

Anyone interested in amateur radio is eligible to apply for membership. Dues for regular licensed amateurs are \$18 per year (from July 1 through June 30). Additional immediate family members pay \$5 each per year. Dues for licensed amateurs older than 59 or younger than 16 are \$12 per year. Dues for non-licensed associate members are \$9 per year. Applications for membership may be obtained from the treasurer or on the RARS website (www.rars.org).

Exciter

The Exciter is the official newsletter of the Raleigh Amateur Radio Society. It appears each month as a PDF on the RARS website at www.rars.org. Members receive email notification when the latest version is available. Please provide your email address to the Treasurer.

The Exciter welcomes articles, advertisements, and other contributions. To submit a piece to the newsletter, please contact the Editor. The Editor reserves the right to edit any and all pieces. The submission deadline for each month's Exciter is the Saturday that is ten days before the general meeting. All submissions must be final. Drafts are not accepted.

The views expressed in the Exciter are those of the individual authors and do not necessarily reflect the views of the Editor or RARS.

Tom Lewis, N4TL, editor (editor@rars.org)

For Your Information

RARS General Meeting

Date: Second Tuesday of each month

Location: Ridge Road Baptist Church 2011
Ridge Road Raleigh, NC, 27607

Time: People begin arriving at 7 p.m. The
meeting officially begins at 7:30 p.m.

RARS Monthly Dinner

All members and guests are welcome to the monthly (first Tuesday) RARS Supper, 6:30PM, at the IHOP Restaurant, 7471 Six Forks road, 27615. Its on the corner of Six Forks road and Sawmill Road, 6:30 PM to 8PM They have a room for us that is to the left when you enter the restaurant. Informal and Dutch, just bring your appetite and best rag to chew.

RARS Repeaters in Raleigh

146.640 and 444.525

Join us for the nightly RARS net at 8 p.m. on the 146.640 repeater. All hams holding a Technician class license or higher are invited to check in. We welcome both RARS and non-RARS members to the net.

There is a net Listing on the RARS website click here. <https://www.rars.org/nets.php>

VE Testing

The RARS VEs will accept walk-in testing in February, May, August and November at 5:30PM, prior to RARS membership meetings at Ridge Road Baptist Church; the RARSfest in April; the Cary Swapfest in July; the JARS-Fest in November; and following RARS license classes. Please bring a photo ID, your original and a copy of your current license, your \$14 exam fee, and any valid CSCEs that prove passing elements beyond that of your current license. Visit <https://www.rars.org> for more information.

December 2019

RARS Net Monthly Summary

Checkins: 481

Traffic Brought/Passed: 9/9

Minutes: 1023

Sessions: 31

Virginia Enzor NC4VA

RARS Net Manager

Interesting info

The Magnetic North Pole Heading Toward Russia.

<https://www.cnn.com/2019/12/18/world/magnetic-north-pole-drift-scn-trnd/index.html>

According to David Rothery who wrote the book "Geology A Complete Introduction", the earth's Magnetic pole moves around and has reversed many times in the history of the earth.

Over-the-Horizon Radars Causing Widespread Interference on 40 Meters

<http://www.arrl.org/news/over-the-horizon-radars-causing-widespread-interference-on-40-meters>

Presidents Comments continued

For those who may not have heard the news, I am sorry to report that the club's longtime Public Service Director, John Stone, K3RHJ, became a silent key on Christmas Eve. I have seen condolences from across the state, since John served RARS and the amateur radio community well for many years.

Carl wrote in a recent Exciter, "The objectives of the club are to promote worldwide friendship through amateur radio; to be of public service by providing radio communications in times of disaster, emergency, or civic needs; to educate members in radio technique and to provide training classes to assist in obtaining amateur radio licenses." We may not be able to be all things to all people, so ultimately, the goal is to serve the interests of our members. I hope the club is providing ways for all members to become involved in an aspect of Amateur Radio that interests them. There are currently many activities for members to plug into.

Some of the enjoyable activities that led me to becoming active in the club are the monthly dinner at IHOP on Six Forks Road for members and families, the nightly nets at 8:00 on the 146.64 MHz repeater, the new Hams and Elmers sessions at 6:00 before each club meeting, Field Day, RARSFEST, and of course the monthly club meetings. Dates and times for activities and events are in the RARS calendar on the web site. I hope to see you at these and other activities.

The list of Amateur Radio activities (and some social ones) available through the club and its members is a long one. Not all are formally scheduled or publicized. If there are Ham radio interests you would like to participate in, please contact me, another board member, or a committee chairperson via the link in the Officers Contacts page on the RARS web site.

I anticipate an eventful and enjoyable year ahead of us.

John Honeycutt, N8ZU

This came from Brian, KN4R.

Here is an interesting short film school video project starring a radio collector friend of mine - Hiroki AH6CY

<https://vimeo.com/376746309/0ebac9f71d>

After watching, I thought it should be named something like "amateur radio in retirement" :-)

PS Hiroki likes hiking and setting up an antenna somewhere out in the desert and making a few contacts with his local QRP group. He has written for QST and Electric Radio magazine...

brian
kn4r

<https://www.rars.org>

RARS December Meeting



Carl Davis, W8WZ and Karl Bowman, W4CHX
outgoing NC ARRL Section Manager

Carl Davis, W8WZ, presented Karl Bowman, W4CHX, outgoing Section Manager, with a special letter of recognition and appreciation on behalf of RARS, for his past service. Karl spoke a few words about his future plans as a non-officer with the ARRL.



Virginia, NC4VA



Marv Hoffman, WA4NC,
Incoming NC ARRL Section Manager

Virginia, NC4VA, introduced Dr. Marvin Hoffman, WA4NC, who has been elected, the new Section Manager for the Roanoke Division. She presented the club with a brief bio. RARS was honored to have Marv speak before the club.

RARS December Meeting



Jim Carroll, KF4QMR; Beth Carroll, N4CAE



During the RARS meeting, Bob Starkenburg, W4TTX, called Beth and Jim Carroll forward. (KF4QMR) and (N4CAE), respectively. Bob presented them with a special RARS plaque of recognition. Beth and Jim have graciously provided the club the use of their farm, for the 22 years since Hurricane Fran forced the club to change locations for the annual Field Day. They were also given Life Memberships to RARS.

RARS December Meeting

Chuck Littlewood, K4HF, did the 2020 RARS Officers induction



Officers in the above picture, left to right.

ARRL Liaison: Chuck Littlewood, K4HF;

President: John Honeycutt, N8ZU;

RARS Net Manager: Virginia Enzor, NC4VA;

RARS Education Director: Carl Davis, W8WZ;

Secretary: Mark Kilmer, KM4JRH;

Director at Large: Tadd Torborg, KA2DEW;

RARS 2020 Field Chair: Bob Starkenburg, W4TTX;

Director at Large: Ken Latchum, AD4GX;

Director at Large: Alan Pitegoff, AB4OZ;

RARS Food Service Chair: Richard Kroeger, N1FUA



December Membership Meeting, Door Prize Winners



Jan Lewis, N4TL – XYL; Larry Wiandt, N4LEW; Mary Jo Littlewood, K4MJL; Brantley West, K4CBW; Alan Pitegoff, AB4OZ; Bill Mars, AK4BL; Ken McEwen, KI4OTO; Mark Kilmer, KM4JRH;

Door prizes

John Damelio, KI4KEP, supplied four tee shirts.

<https://www.part97.com/>

RARS supplied three \$20 gift cards to Target.

An anonymous donor provided a 2019 ARRL six volume boxed set of the ARRL Handbook.



Some of the food for the RARS pot luck Holiday party.

<https://www.rars.org>

RARS Birthdays

Andy	AA0WX	01/00
Bob	N4GEB	01/01
Grady	AJ4YA	01/01
Kevin	KN4AAG	01/02
Barry	KK4NUN	01/03
Howard	KI4GNB	01/03
Jerry	KE4TTS	01/04
Chuck	K4HF	01/04
John	WB4DDK	01/04
Joe	KM4WRQ	01/06
John	N4YRD	01/08
Lauren	W0LD	01/09
Richard	N1FUA	01/09
Ed	KN4CUU	01/09
Beth	KF4QMR	01/09
Jim	N4CAE	01/09
Paul	KE4TMN	01/10
Chris	K4CKB	01/11
Dan	WY3O	01/11
Evan	ZL2TFA	01/14
Bill	KI4BKF	01/15
Marko	KM4ZBT	01/16
Dick	KM4YLH	01/19
Marc	W4MPS	01/19
Dave	N4CVV	01/19
Ashby	KB5ZIH	01/20
David Briest	Not Licensed	01/20
Dave	N4DSF	01/21
Jim	KJ4BYN	01/22
Ken	AC4RD	01/23
Cyndi	KD4ACW	01/30
Alan	AB4OZ	01/30
Tom	K2UCU	01/31

*Everyone is
welcome!*



11:30 AM every Thursday a group of Hams get together for Lunch at Taco Bell. The address is 7036 E Hwy 64 Knightdale, 27545. 1.2 miles east of I540.

New Members

David Peterson	KN8DAP
Freddie Herring	KG4GTB



*New HAM meeting, 6:00 p.m. before the
member meeting*

Tadd Torborg, KA2DEW, New Ham meeting Coordinator

*The New Hams meeting is held every month before the regular RARS meeting.
We'll try to start by 6pm. We try to address topics in a manner that will be of help
to hams in their first year of operation.*



John Honeycutt, N8ZU and
Tadd Torborg, KA2DEW



The new hams made small 2 meter vertical antennas. Tadd showed them how to tune the antenna by bending the top over until the SWR was good.



Future Hamfests

A full list of Hamfests can be found at the
[ARRL website.](#)

01/11/2020 | **W4NC First-Fest**

Location: Winston-Salem, NC
Type: ARRL Hamfest
Sponsor: Forsyth Amateur Radio Club
Website: <http://W4NC.com>

02/01/2020 | **FrostFest, ARRL Virginia State Convention 2020**

Location: Richmond, VA
Type: ARRL Convention
Sponsor: Richmond Amateur Telecommunications Society
Website: <http://frostfest.com>

03/13/2020 | **Charlotte Hamfest, ARRL North Carolina Section Convention 2020**

Location: Concord, NC
Type: ARRL Convention
Sponsor: Mecklenburg Amateur Radio Society
Website: <http://www.charlottehamfest.org>

04/11/2020 | **Raleigh Hamfest, ARRL Roanoke Division Convention**

RARSfest

Location: Raleigh, NC
Type: ARRL Convention
Sponsor: Raleigh Amateur Radio Society
Website: <http://rarsfest.org>

Deepest Sympathies

A transfer of \$50 has been made to the RARS / Dick Bitner Youth Education fund in memory of Adrian Howell II, KM4CSH (March 7, 1964 – December 3, 2019)

4 Eden Dr Smithfield, NC 27577

<https://www.parrishfh.com/obituary/adrian-howell-ii>

Deepest Sympathies

A transfer of \$50 has been made to the RARS / Dick Bitner Youth Education fund in memory of John Stone, K3RHJ (May 6, 1946 – December 24, 2019)

1150 Lydia Perry Road, Sanford, NC 27330

Deepest Sympathies

On Nov. 21, 2019 after a short illness Michael D.Thurman, KB7NLA, passed away. He was not a member of RARS but would come to a meeting once in a while. He also attended Field Day in 2019. He was from Wendell, NC.

Future RARS Meeting Topics

Titles, topics, and speakers subject to change.

2/11/2020	Blue Ridge Microwave Society	Dr. Dennis Sweeney, WA4LPR & Stan Dillon, K4RCA
3/10/2020	Awards, RARS Birthday Party & RARSfest Update RARSfest date April 11th	RARSfest Chair Tara Goodwin W4TSW
4/14/2020	80 foot tower installation with 40/30 Optibeam	Dave Wood, W4EJ

<https://www.rars.org>

RARS@yahoogroups.com, September 30, 2001 – December 1, 2019

RARS@yahoogroups.com, known as "[RARS]", passed away on Sunday, December 1, 2019 in the community of groups.yahoo.com/. Born September 30, 2001 in the Raleigh Amateur Radio Society, [RARS] was the son of Joe Zobkiw, WA2YZO. [RARS] is survived by rars@groups.io and over 200 followers. Condolences may be conveyed at <https://groups.io/g/rars>

Remembrances & Tributes:

Thanks to the Internet Archive WayBack Machine (<http://web.archive.org/>) we are able to research the ancestry and life of the [RARS] Yahoo Group as well as the online history of the Raleigh Amateur Radio Society before and through the life of the [RARS] Yahoo Group. Reading those archives we find that RARS had a website at <http://www.rtpnet.org/~rars/> by the end of 1997. By the end of 1998 the RARS website [boasted a mailing list](#) using a [Majordomo](#) "mail list server" at rars-l@rtpnet.org. In February 2000 KF4RDP, Cliff Broughton, created an [open forum](#) on the website where members and visitors were "invited to post information, ask questions or to express their views on topics of interest related to Amateur Radio and to RARS". The last post on the Forum was on [Aug. 6, 2001](#).

Joe Zobkiw became webmaster in 2001 and on September 30, 2001 created the [RARS] [Yahoo group](#) as an open, un-moderated group.

[RARS] became quite popular during the first decade of 2000's and it didn't take long before it became a "moderated" group with many active participants and more than one heated discussion which occasionally had to be squelched by the moderators. Yahoo stored all Group messages in a database as "conversations" and members could search the conversations based on a variety of criteria. New messages could be posted on the website, or sent in via email. Subscribers to the group could then read the messages online and if they wished they could also receive them in email. The Yahoo group web pages also provided a calendar on which events could be scheduled and email reminders sent to subscribers. It also had storage for pictures and other files. The calendar was used occasionally, mostly to send reminders of repeating events, but the pictures and files were only available to the owner and moderators and those features were not utilized.

In the second decade the [RARS] Group seemed to become less active, possibly due to changes in the Yahoo website that supported the group. Yahoo had revamped their groups and some users were unhappy with the new "neo" version, especially with the changes made to the search engine. In the later

half of the decade many groups abandoned Yahoo, migrating to other newer community group sites like groups.io, Google Groups, and Facebook. In mid October of 2019 Yahoo announced that the Yahoo Groups web interface and all online content would be deleted leaving only the email services in their groups. Users would no longer have access to the calendar or the 19 years of searchable archived conversations. All stored data including conversations were scheduled to be deleted. Group members could still send email to the group but it would not be viewable online. Yahoo Groups would basically be just an email list server but unlike many email list servers there would be no archives.

Thanks to Tadd Torbeog, KA2DEW, a new user community forum known as [rars] and rars@groups.io was born on October 19th and the decision was made that it would replace the [RARS] Yahoo Group which would then be deleted at the end of November. Messages announcing the change were posted to the [RARS] Yahoo group and the rars-l members only email list including an invitation to join the new <https://groups.io/g/rars>.

The [RARS] Yahoo Group was laid to rest on December 1, 2019.

73, K4HM - Hank

SKYWARN Recognition Day 2019

Virginia Enzor NC4VA

Central Carolina SKYWARN Emergency Coordinator

On December 7, 2019, voices on amateur radio were heard saying, "This is WX4NC, Raleigh National Weather Service for SKYWARN Recognition Day, looking for contacts." That's because the National Weather Service (NWS) in Raleigh and Central Carolina SKYWARN participated in the 21st annual SKY-WARN Recognition Day (SRD).

SRD was developed in 1999 by the NWS and the American Radio Relay League (ARRL) to recognize the contributions that SKYWARN radio operators/spotters make to the NWS. During this 24-hour event, spotters made contact with SKYWARN radio operators at NWS offices across the nation.

For the Raleigh NWS, this event also served as an opportunity to test amateur radios, antennas and other forms of backup communications.

We operated on a number of local VHF/UHF repeaters, HF (SSB and FT8), and IRLP/Echolink.

What added to the excitement for the WX4NC team this year? First, two guest operators - Greg Hauser W3FIE, Statewide Interoperability Coordinator/COMMs Branch Manager with North Carolina Emergency Management, and Karl Bowman W4CHX, ARRL NC Section Manager. Both racked up points

SKYWARN Recognition Day 2019, continued

and QSOs for our team! Also joining us was Ron Casey K4JDR who has given invaluable support to Central Carolina SKYWARN over the years via his expertise and the use of the Carolina 440 Link UHF Link System.

Second was the introduction of a new operating mode for us – FT8. This mode proved popular and scored us some DX contacts too.

Third was the test of a new permanent antenna on top of the NWS building. Raleigh NWS Warning Coordinator Nick Petro WX3H installed a Diamond CP-6SAR antenna a few weeks before the event; the antenna performed like a champ.

Here were our final results:

Total number of contacts including dupes: 252

Total number of contacts after dupes removed: 234

Total number of NWS offices contacted: 39

Total number of states contacted: 40

Total number DX contacts: 10 contacts from Canada, Cuba, Bosnia-Herzegovina and Spain

These numbers earned us the Blizzard Certificate!

Thanks to everyone who checked in with WX4NC for SRD!
And, especially thanks to all spotters for your hazardous weather reports throughout the year; your reports helped the NWS protect life and property.

New Diamond CP-6SAR on
top of the NWS facility



SKYWARN Recognition Day 2019, continued

WX4NC SRD Team 2019



WX4NC SRD Team 2019; 1st Row: Lauren Petro KF7RCU, Virginia Enzor NC4VA, Randy Stark WN4RSS, Ron Casey K4JDR, and Ken Stark W4KJS; 2nd Row Nick Petro WX3H, Greg Hauser W3FIE, Scott Lewis AB4SL, Karl Bowman W4CHX; Not pictured – Bob Woodson WX4MMM and Cassie Lilley W2YBN

EIGHT REASONS WHY I LIKE TACO THURSDAY

Ham Life by Howard A. Goodman, N4KYW

Though it had already been in existence a long time I discovered Taco Thursday only last year (2018) when the founder, Alan Pitegoff, AB4OZ, happened to mention it in passing during one of the evening nets. Since then I've managed to attend more often than not.

1. It's a chance for me to get out. As someone who is increasingly visited with health issues, I don't travel far from home nearly as much as I used to. But Taco Thursday is something I can manage by myself... at least for the time being. While I'm in Knightdale I use the opportunity to refuel my car for a few pennies less per gallon.
2. It's an opportunity to meet face-to-face with fellow club members with whom you may QSO on the air but otherwise never see. I am one who happens to enjoy the subtle art of face-callsign matching.
3. I'd always looked forward to joining a ROMEO group (**Real Old Men Eating Out**). By observation, the typical make-up of Taco Thursday attendees qualifies us as such a group. I should emphasize, though, ladies of the hobby are always encouraged and welcome to attend.
4. The venue and the food ain't bad. The Taco Bell in Knightdale is fairly well run, staffed with folks who don't come and go, and many of the menu offerings are consistently good in addition to being inexpensive. The time of day (11:30 – 1:30) avoids rush hour traffic, in sharp contrast to the monthly club dinners, so for me the 27 mile (one-way) trip is bearable.
5. Alan once said, "Taco Thursday is like a mini-hamfest." It's a convenient time/place to exchange parts, equipment, tools, and anything else that's typically found at a brick-and-mortar hamfest. And it's never more than one-week away. It's also a good time to share 'Show and Tell' projects, as Johnny Mayfield, WA9SZL, occasionally does.
6. In addition, Taco Thursday is a time/place for us OMs in particular to discuss issues beyond those of our mutual hobby, such as retirement finances, social security, health issues, and senior freebies.
7. If our group should ever wish to say *adios* to Tex-Mex food, there are other venues as close as on either side of the Knightdale Taco Bell.
8. The XYL doesn't disapprove.

Howard's new book, "Grown Men in Love," is now available at all branches of the Wake County Public Library.

RARS Classifieds

Copied from <https://www.rars.org/classifieds.php>

The items below were listed within the last 30 days on the RARS website.

3 Amp Variac

Posted January 1st, 2020 by: WM2Z

Contact: wmelhado@nc.rr.com

Superior Products Powerstat Variac. Rated for 115 VAC 60 Hz input, 3 amp output. The unit is mounted in a plastic food container with power cords attached for convenience and is fused internally.

\$5 Photos available

Kenwood Hand Held DTMF Microphone

Posted January 1st, 2020 by: WM2Z

Contact: wmelhado@nc.rr.com

Used Kenwood hand held DTMF electret condenser microphone with coiled cord and RJ-45 connector in very good condition. Previously used with TM-733 radio.

\$10 Photos available

Motorola External Speaker

Posted January 1st, 2020 by: WM2Z

Contact: wmelhado@nc.rr.com

Used Motorola HSN4000A external speaker with adjustable mounting bracket in good condition.

\$10 Photos available

ALINCO 2-METER FM MOBILE, MODEL DR-135T MKIII - \$100

Posted December 27th, 2019 by: N4KYW

Contact: howagood@yahoo.com

Venerable 2-meter mobile FM transceiver from Alinco. Like-new condx. 3 Xmit power levels: (50/10/5 watts). 100 Memories, Front Panel GPS Input for APRS, Ignition Key On/Off Feature, Ten Autodial Memories, Encode/Decode, Theft Deterrent System, large alphanumeric display, Time-Out Timer, Airband Receive. Includes DTMF Mic, DC power cord, mounting bracket. \$100

<https://www.rars.org>

RARS Classifieds continued

Pair of SW 12-Volt Exterior Flood Lamps

Posted December 15th, 2019 by: WM2Z

Contact: wmelhado@nc.rr.com

Used pair of 12-volt exterior flood lamps in good condition. These lamps are perfect for lighting up field operations. \$20 pair

Amateur Station Remote Control Adapter

Posted December 11th, 2019 by: WM2Z

Contact: wmelhado@nc.rr.com

Homebrew Amateur Radio Station Remote Operation Adapter will give you a good start in implementing remote control of your station. This adapter facilitates remote control of two 120-volt devices such as a station power supply or rotator. Includes 3-minute PTT timer per FCC requirements for remote operation. Contains a relay board with 8 SPDT relays energized under software control via a computer parallel port. Relays contacts are rated for 10 amps at 125 volts. 5 relays used for control leaving 3 spares for other uses. Communication with station computer over the Internet is achieved via RealVNC, Teamviewer or Microsoft Remote Desktop

software. Receive and transmit audio are exchanged via Skype if remote control software does not include audio functions.

Rig control is achieved via software such as Ham Radio Deluxe. Includes PTT cable wired for ICOM 8-pin mic connector, but

parallel cable is not included. Relay control software can be downloaded at <http://kitsrus.com/zip/k74disk.zip>. Since modern PCs do have parallel ports use of a USB-Parallel adapter is required. Project notes, schematics and QST articles included.

I used this equipment to successfully implement remote control of my station. In my setup I left the station computer powered on, but an improvement would be to implement Wake-on-LAN so that it could be remotely started. Getting this up and running will require some work, but could be an interesting project.

\$20. Photos available

<http://www.pcbcarolina.com/>

PCB Carolina is North Carolina's Premier Electronics Trade Show.

Located in Raleigh near Research Triangle Park makes this a prime area for this highly technical conference on electronics. There will be 16 technical sessions, a keynote address, a vendor exhibition with over 70 companies participating, food throughout the day, and best of all, this event is **FREE** to all attendees.

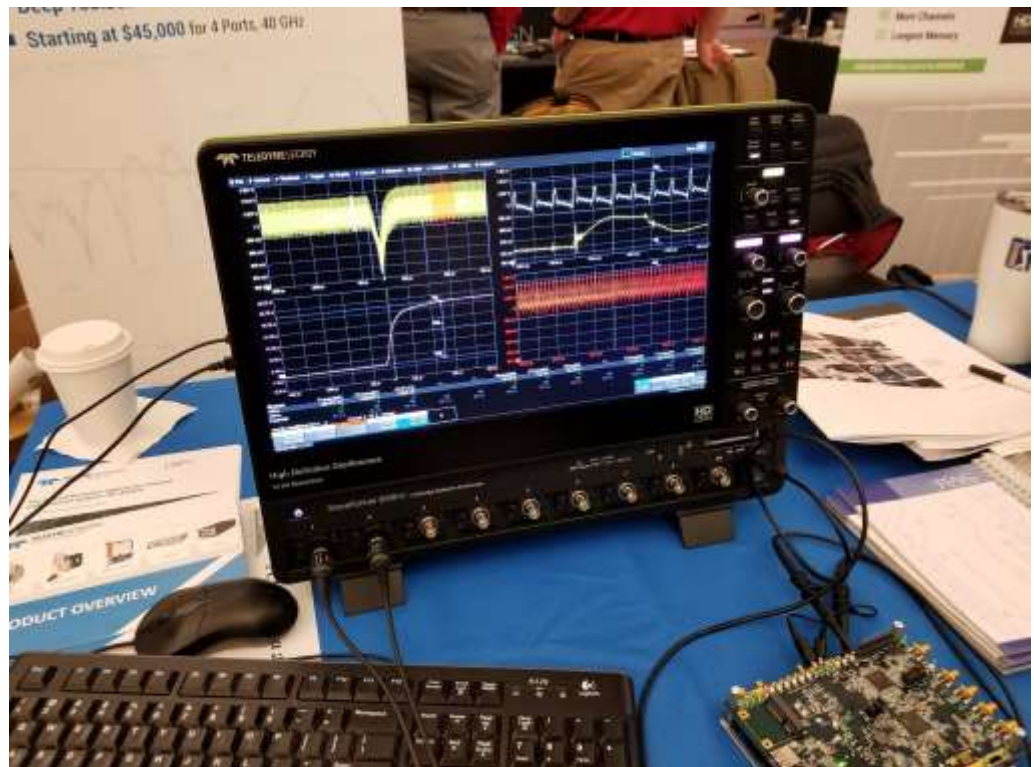
This is the place to be If you are involved in any stage of electronics: Product Development, PCB Design, Signal Integrity, Electrical Engineering, Firmware, Thermal, Mechanical, Test, Inspection, Contract Manufacturing, Technician, Debug, Compliance, Analysis, Purchasing, Management, etc.

PCB Carolina is organized and run by the volunteers of the RTP Chapter of the IPC Designer's Council. We are committed to producing the best trade show possible. The exhibit hall will be filled with a diverse list of vendors offering a range of products and services. The technical classes will include outstanding presentations of the hottest topics including emerging technologies. The reputation of this event has spread coast to coast.

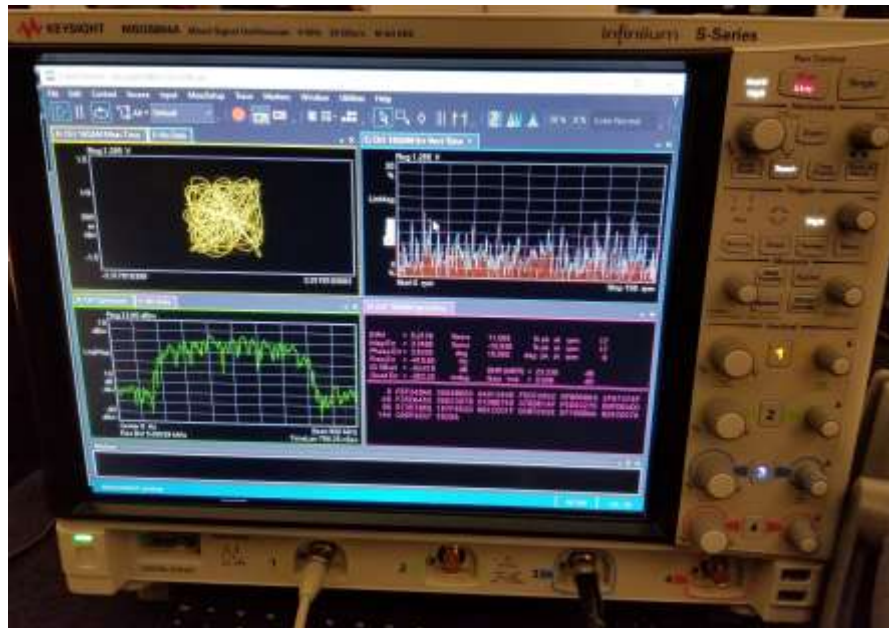
PBC Carolina comments by Tom Lewis, N4TL

This event was held on November 13, 2019. I am retired but I still like to see what is happening in the latest technology. I also got to see some old friends. I took a few pictures of Oscilloscopes. The text to the upper left on this one states, "Starting at \$45,000"

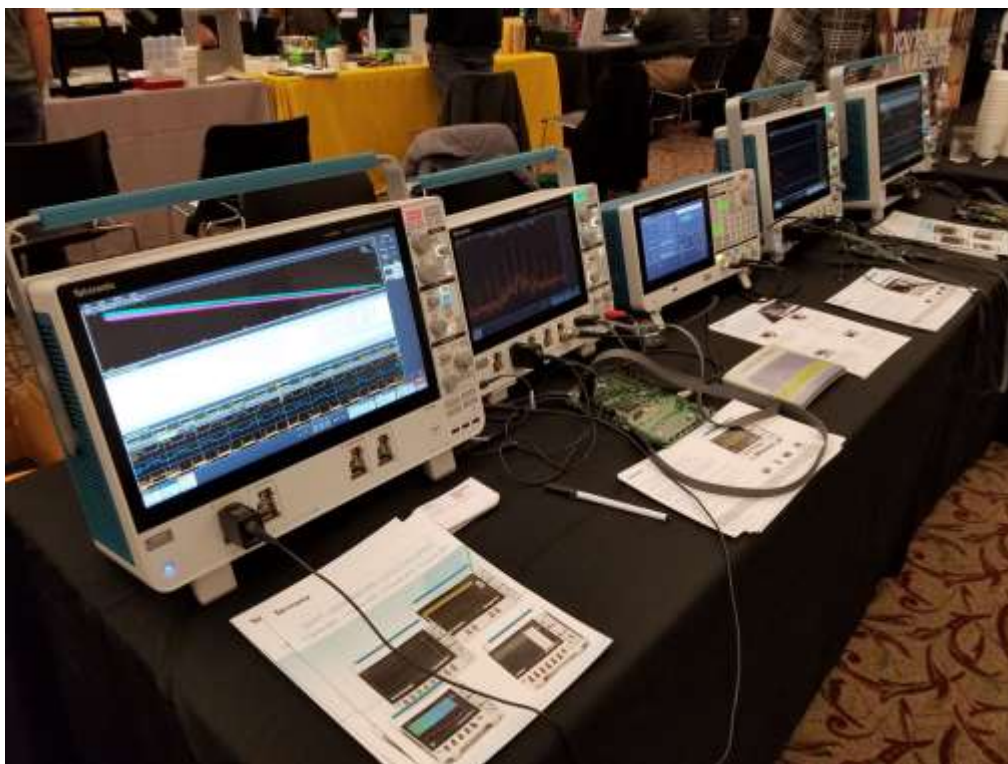
Teledyne Lecroy
High Definition
Oscilloscope.



<https://www.rars.org>



Keysight Oscilloscope



Tektronix Oscilloscopes



Weller soldering station with a microscope for surface mount parts.

A different room was being used to teach basic soldering. I did not take a picture there. This room was for teaching surface mount rework.

The Weller WXR3 rework soldering station lists for \$2,660 at Digikey.

The Meiji SMD-5 Stereo Zoom Microscope package with Incident Ring Light LED on a Boom Stand for Surface Mount Device Inspection – 7x – 90x Magnification lists for \$2,643.

Table, chair and aspirin are extra.

Minutes

Raleigh Amateur Radio Society

Board Members Meeting

Date | time 11/17/2019 @ 7:04 pm | Meeting called to order by Carl Davis W8WZ

Approval of Minutes

Quorum present. October club minutes approved..

President Report-Carl W8WZ

No report

Vice President Report/Exciter Report-Tom N4TL

The December club meeting will be the RARS Christmas Party. The covered dish sign-up is available on the RARS website.

Treasurer's Report-Greg KE4PAX

We have 381 members signed up for the 2019-2020 year. 79 members from 2018-2019 that have not yet renewed.

The monies from 50/50 raffle fund, that is no longer active, have been transferred to the repeater fund.

The SERA payment for the 2020 year has been paid.

2018-2019 taxes have been filed.

Amazon makes a quarterly donation via the Amazon Smile program.

A donation in memory of Tommy Strickland was made to the RARS Bitner Youth Education Program, 10/15/2019. The last disbursement from the fund on 11/19/2018 was made for 9 Test Sessions.

2019-2020, 7 Complimentary Memberships have been presented.

For more detailed information regarding Greg's Treasurers report please contact KE4PAX

Acting Secretary's Report -Mark - KM4JRH

Call signs should be verified with the door prize winners for proper identification in the Exciter. Tom will handle this.

Committee Reports

Education Director-Carl Davis W8WZ: Carl has requested the student feedback forms from Sanderson High School. The school is happy with our success and have invited us back for more sessions. Some suggestions received from the students are:

- Extend the course to more than 5 weeks.
- Need more "Hands On". It was suggested that each student build a 2 meter ground plane.

Next year, have a student from a prior class teach one of the sessions.

Food Service Chair - Richard N1FUA: Richard will provide table ware, ice and drinks for the Christmas party. No snacks will be served .

FM Repeater Chair - Chuck DeCourt W3WZN: Alan indicated that Chuck has been doing monthly visits to the repeater sites.

RARSfest Chair-Tara W4TSW: The first planning and organization meeting has been held. The following topics were discussed.

- A slight price increase in ticket and table costs will be implemented, to align with new charges for the facility.
- The Youth Station will be dropped this year due the small number of participants.

All wording referencing the RARSfest J-pole build-it project will be a "wire J-pole" antenna.

- Last years critique will be discussed at the next meeting.

Joanne Mars will head the Friday dinner this year.

NCQP Chair - Marty Young W4MY: Marty outlined the changes coming this year for various ARRL contesting.

ARRL Liaison - Chuck Littlewood K4HF: RARS will host the ARRL 2020 Roanoke Division Convention. All ARRL members in NC are expecting to hear the results of the ARRL NC Section Manager election within the next couple of weeks. The new NC SM is Marvin Hoffman, WA4NC of Boone, NC

Net Manager -Virginia Enzor NC4VA: All is going well.

Director-at-Large-Alan Pitegoff AB4OZ: Chuck DeCourt is continuing to make the monthly repeater site visits.

RARS Webmaster - Hank Montgomery- K4HM: Yahoo groups is being discontinued. Everyone should move to groups.io. You do not have to be a member to subscribe. This will be announced at the next club meeting.

New officers and board members will be added to the website.

The ARRL News-line RSS feed has been added back to the website.

The Classified ads section is getting more activity.

Officer and board member job descriptions are in the Board Admin section. Newly elected members should review. These are suggestions, rather than hard fast rules.

Only members have access to the rars-l list-serve.

Non Reports

Public Service Director - John Stone K3RHJ:

Public Information Officer - Tara Goodwin W4TSW:

Field Day Chair - Bob W4TTX:

Director-at-Large - Joanne Mars AA3N:

Director-at-Large-Robert Walker K4WWR:

W4DW/W4RNC TRUSTEE - Jeff Wittich, AC4ZO:

ARRL NC Section Manager - Karl Bowman W4CHX:

Youth Director- Murray Merner K4MHM:

RARS VE Coordinators - Joe (WA4GIR) and Liz (KO4CK) White:

Immediate Past President - Dennis Keith NC4DK:

Old Business

Ken (AD4GX) made personal contact with all VE testing participants, welcoming them to the member meeting.

We did have some participation as a result. The logistics worked well.

New Business

The position of Youth Director will not be filled at this time.

Alan (AB4OZ) will be replacing Joanne Mars at the RARS member meeting welcome table.

Additional Business/Comments/Announcements

Alan and Mark will design new forms the club meeting sign-in sheets.

A new form will be designed for the complementary club memberships, to include additional information.

Next Meeting

There will be no Board Meeting for the month of December.

Meeting was adjourned.

Meeting minutes respectively submitted by Mark Kilmer, KM4JRH

Minutes

Raleigh Amateur Radio Society

Members Meeting

Date | time 12/10/2019 @ 7:30 p.m. | *Meeting called to order by* Carl Davis (W8WZ)

Membership Meeting

The monthly membership meeting of the Raleigh Amateur Radio Society met at the Ridge Road Baptist Church in Raleigh. President Carl Davis (W8WZ) called the meeting to order, at 7:19 p.m.

The Pledge of Allegiance was recited.

RARS Members meeting minutes continued

Approval of Minutes

A quorum was present and the November minutes were approved.

Continuing Announcements

The RARS dinner takes place monthly on the first Tuesday of the month at 6:30 p.m. at the IHOP, Celebration at Six Forks, 7471 Six Forks Road, Raleigh.

The next board meeting, which is open to all our members, will be Tuesday January 21st at 7:00 p.m. in the church conference room.

Tonight's after-meeting gathering, for any who are interested, will be at the Rudinos, 3101 Edwards Mill Rd., Raleigh.

A new HAM/Elmer's meeting with new HAMs, and anyone interested, takes place before each membership meeting at 6:00 p.m. and is presented by Tadd (KA2DEW).

Door Prizes

Door prizes were donated for tonight's drawing by the following:

RARS provided three \$20 gift cards to Target.

An anonymous donor provided a 2019 ARRL six volume boxed set of the ARRL Handbook.

John Damelio (KI4KEP) supplied custom T-Shirts for three of the prizes.

Tonight's winners were:

Mary Jo Littlewood (K4MJL); Brantly West (K4CBW); Mark Kilmer (KM4JRH); Bill Mars (AK4BL);

Alan Pitegoff (AB4OZ); Larry Wiandt (N4LEW); Ken McEwen (KI4OTO); Jan Lewis (N4TL-XYL)

Vice President Report/Exciter Chair-Tom N4TL

Tom announced Robert Condor would present the January meeting. The topic will be Dxpeditons in the Caribbean.

The February meeting will be a presentation from the Blue Ridge Microwave Society. (BRMS)

Treasurer's Report-Greg KE4PAX

No report

RARS Members meeting minutes continued

For those interested in official Treasurer Report can contact Greg (KE4PAX)

Secretary's Report-Tara W4TSW

No Report

Board and Committee Reports

President - (Carl W8WZ)

Carl announced that there would be no RARS Board Meeting in December.

Board and Committee with No Report

Public Service – John, K3RHJ

Food Service – Richard, N1FUA

Education Director - Carl W8WZ

ARRL Liaison – Chuck, K4HF

Youth Director – Murray, K4MHM

Field Day Chair – Bob, W4TTX

Net Manager – Virginia, NC4VA

Past President – Dennis, NC4DK

ARRL Section Manager – Karl, W4CHX

Webmaster – Hank, K4HM

W4DW/W4RNC Trustee – Jeff, AC4ZO

Director at Large - Alan AB4OZ

Director at Large – Joanne, AA3N

FM Repeater Chair – Chuck, W3WZN

Public Information Officer – Tara, W4TSW

NCQSO Party Chair – Marty, W4MY

[RARSfest Chair-Tara, W4TSW](#)

RARS Members meeting minutes continued

Old Business

None brought forth.

New Business

Chuck Littlewood (K4HF) installed the new RARS Officers and Board members. All responded affirmatively to the RARS oath.

RARS Officers for a two year term:

President: John Honeycutt, N8ZU

Secretary: Mark Kilmer, KM4JRH

Board Members for a one year term:

Public Service: John Stone, K3RHJ

Public Information Officer: Tara Goodwin, W4TSW

RARS Exciter Editor: Tom Lewis, N4TL

RARS Net Manager: Virginia Enzor, NC4VA

Director at Large: Alan Pitegoff, AB4OZ

Director at Large: Tadd Torborg, KA2DEW

Director at Large: Ken Latchum, AD4GX

FM Repeater Chair: Chuck DeCourt, W3WZN

W4DW, W4RNC, N4RAL Trustee: Jeff Wittich, AC4ZO

ARRL Liaison: Chuck Littlewood, K4HF

RARS Education Director: Carl Davis, W8WZ

RARS Webmaster: Hank Montgomery, K4HM

RARS Food Service Chair: Richard Kroeger, N1FUA

RARSfest Chair-Tara Goodwin, W4TSW

RARS Members meeting minutes continued

RARS NC QSO Party Chair: Marty Young, W4MY

RARS 2020 Field Chair: Bob Starkenburg, W4TTX

**RARS Volunteer Exam Coordinators: Joe and Liz White,
KO4CK and WA4GIR respectively.**

Special Recognition:

Carl Davis (W8WZ) presented Karl Bowman (W4CHX), outgoing Section Manager, with a special letter of recognition and appreciation on behalf of RARS, for his past service. Karl spoke a few words about his future plans as a non-officer with the ARRL.

Bob Starkenburg (W4TTX) called Beth and Jim Carroll forward. (KF4QMR) and (N4CAE), respectively. Bob presented them with a special RARS plaque of recognition. Beth and Jim have graciously provided the club the use of their farm, for the 22 years since Hurricane Fran forced the club to change locations for the annual Field Day. They were also given Life Memberships to RARS.

Tonight's Program

Virginia (NC4VA) introduced Dr. Marvin Hoffman, who has been elected, the new Section Manager for the Roanoke Division. She presented the club with a brief bio. RARS was honored to have Marv speak before the club.

Special Awards presentation.

Tonight's New HAM meeting topic was building 2-meter ground plane antennas. The participants used the antennas to make actual contacts.

Richard (N1FUA) gave the blessing and the Christmas Party social event went into full swing.

Additional Business/Comments/Announcements

None brought forward.

Next Meeting

01/14/2020, 2011 Ridge Road at 7:30 p.m.

Respectfully submitted by Mark Kilmer (KM4JRH)